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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,993	05/17/2002	Oyvind Moen	BIF 103907/US	2593

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EXAMINER

SMITH, TYRONE W

ART UNIT PAPER NUMBER

2837

DATE MAILED: 12/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/018,993

Applicant(s)

MOEN ET AL.

Examiner

Tyrone W Smith

Art Unit

2837

WU

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) Z.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 and 3 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 1, the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Regarding Claim 1, the phrase "in that it consists in" should be change to provide a more presentation of the invention.

Regarding Claim 1, the phrase "receive current wave substantially when such coincidences occur". Examiner requests change to the phrase by either taking out the word substantially or rewording the limitation to be more specific.

Regarding Claim 3, the phrase "...parameter is chosen to be large enough to command said controller". Examiner requests clarification of this limitation.

3. The claims (1-12) are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

4. Applicant is reminded that claims (2-12) dependent on the independent claim (1) are also rejected on 35 U.S.C. 112 second paragraph.

5. The following rejection is with the best intentions, knowledge and understanding of the claims. Examiner requests that the Applicant clarify the claims for apt prosecution.

**Claim Rejections - 35 USC § 102**

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 7, 11 and 12 rejected under 35 U.S.C. 102(b) as being anticipated by Bose.

Regarding Claims 1-4, 7, 11 and 12. Bose discloses a scalar decoupled control for a induction machine that produces a current set point ( $I_s^*$  and  $\pm I_s^*$  in Figure 1) expressed by the amplitude and the phase referred to as the rotor flux as a function of the required torque and flux (column 3 lines 1-37), predicting phase coincidences or error between the stator current ( $[I_s]$  in Figure 1) and set point ( $I_s^*$  and  $\pm I_s^*$  in Figure 1) (column 3 lines 26-37), commanding the controller/voltage controller (Figure 1 item 25) so that the windings receive a command current signal when coincidences or errors occur (column 3 lines 38-65).

**Claim Rejections - 35 USC § 103**

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5-6 and 8-10 rejected under 35 U.S.C. 103(a) as being unpatentable over Bose (4418308) in view of Rowan et al (4996470).

Regarding Claims 5-6 and 8-10. Bose discloses a scalar decoupled control for a induction machine that produces a current set point ( $I_s^*$  and  $\pm I_s^*$  in Figure 1) expressed by the amplitude and the phase referred to as the rotor flux as a function of the required torque and flux (column 3 lines 1-37), predicting phase coincidences or error between the stator current ( $[I_s]$  in Figure 1) and set point ( $I_s^*$  and  $\pm I_s^*$  in Figure 1) (column 3 lines 26-37), commanding the controller (Figure 1 item 25) so that the windings receive a command current signal when coincidences or errors occur (column 3 lines 38-65). However, Bose does not disclose the use of thyristors to provide rotation direction of the multiphase main voltage.

Rowan discloses an electric motor speed control apparatus and method that includes thyristors (First page Figure items 16-18) connected multiphase main supply (first page Figure item A-C) and provide direction rotation of the multiphase main voltage (column 3 lines 58-68 and column 4 lines 1-27). Further, the rotor electromotive force is determined from the measured stator voltage, which controls and represents the speed of the motor (column 12 lines 19-68 and column 13 lines 1-67).

It would have been obvious to one of ordinary skill in the art at the time of invention to use Bose scalar decoupled control for an induction machine with Rowan's electric motor speed control apparatus and method. The advantage of combining the two would provide a system by incorporating a mechanism for reducing the speed of the motor without the need of an additional device to reverse the connections of the motor to the AC power source.

**Conclusion**

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art(s) pertaining to the control of induction motor is disclosed in the attached PTO-892.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tyrone W Smith whose telephone number is 703-306-5987. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Nappi, can be reached on 703-308-3370. The fax phone number for the organization where this application or proceeding is assigned is 703-308-3431.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Tyrone Smith  
Patent Examiner

Art Unit 2837

  
**ROBERT NAPPI**  
**SUPERVISORY PATENT EXAMINER**